



## HUMIDITY AND TEMPERATURE COMBINATION SENSORS FOR ENERGY EFFICIENT APPLICATIONS

The demand for smaller, faster, more accurate and energy efficient sensors which provide better analysis of moisture control, is on the rise. From refrigerators to respirators, HVAC systems to cabin comfort in vehicles, there is an increasing trend for humidity sensing technology. To compete in today's ever-increasing competitive market, sensors must be more efficient and cost-effective, characterized by smaller size and precision measurement. TE Connectivity's HTU31 humidity & temperature sensor is one of the smallest and most accurate humidity sensors on the market. The HTU31 provides fast response time, precision measurement, low hysteresis and sustained performance, even in the most harshest environments.

### DESIGN QUESTIONS?

- What is the lag in response time or how long does it take for the sensor to return to its normal operating state?
- What is the measurement range for the humidity sensor?
- What is the measurement range for the temperature sensing?
- What is the response time?

- HVAC
- REFRIGERATORS, FREEZERS
- RESPIRATORS, VENTILATORS
- PRINTERS
- WASHING MACHINES, DRYERS

FIND OUT MORE



# CHOOSE SENSORS ACCORDING TO YOUR APPLICATION



	HTU31D	HTU31V	HTU21D	HTU21DF	HTU21P	HTU20D	HTU20DF	HTU20P
<b>Output</b>	Digital I <sup>2</sup> C	Analog Direct Voltage	Digital I <sup>2</sup> C	Digital I <sup>2</sup> C	Analog PWM	Digital I <sup>2</sup> C	Digital I <sup>2</sup> C	Analog PWM
<b>Filter</b>	No	No	No	Yes	No	No	Yes	No
<b>RH Accuracy 20%RH to 80%RH</b>	±2%RH Typ / ±2.5%RH Max Fully calibrated		±2.5%RH Typ / ±3%RH Max Fully calibrated			±3%RH Typ / ±5%RH Max Fully calibrated		
<b>DFN Package Size (mm)</b>	2.5x.25x0.9		3.0x3.0x0.9					
<b>Power Supply (V)</b>	3 - 5.5		1.5 - 3.6					
<b>Operating Range</b>	Relative Humidity: 0 -100%RH Temperature: -40°C / 125°C Maximum Humidity of 250g/Kg							
<b>T° Accuracy 5°C - 60°C</b>	±0.2°C Typ / ±0.3°C Max		±0.3°C Typ / ±0.4°C Max Fully calibrated					

## PRECISE ENGINEERING

- Strict linear response curve through humidity (0-100%) and temperature (-40 to 125°C) respectively
- Specific polymer combined with calibration slope and offset skills

## FAST RESPONSE TIME

- Industry leading response time (t63% in 5 sec)
- Even after condensation the response time is t63% in 10 sec, enabling sustained system performance
- An optional filter membrane is specially designed to support harsh environments

## HIGH PERFORMANCE

- Specific die structure and IP67 rated sealing with filter options
- Even after high humidity and temperature exposure or condensation events

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